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For gas streams above ambient temperature, the Method 5 sampling train shall be operated with a probe and filter temperature slightly above the effluent temperature (up to a maximum filter temperature of 121 °C (250 °F)) in order to prevent water condensation on the filter.

(2) Method 9 and the procedures in § 60.11 shall be used to determine opacity from stack emissions and process fugitive emissions. The observer shall read opacity only when emissions are clearly identified as emanating solely from the affected facility being observed.

(c) To comply with § 60.385(c), the owner or operator shall use the monitoring devices in § 60.384(a) and (b) to determine the pressure loss of the gas stream through the scrubber and scrubbing liquid flow rate at any time during each particulate matter run, and the average of the three determinations shall be computed.

[54 FR 6676, Feb. 14, 1989, as amended at 65 FR 61760, Oct. 17, 2000]

Subpart MM—Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations

SOURCE: 45 FR 85415, Dec. 24, 1980, unless otherwise noted.

§ 60.390 Applicability and designation of affected facility.

(a) The provisions of this subpart apply to the following affected facilities in an automobile or light-duty truck assembly plant: each prime coat operation, each guide coat operation, and each topcoat operation.

(b) Exempted from the provisions of this subpart are operations used to coat plastic body components or all-plastic automobile or light-duty truck bodies on separate coating lines. The attachment of plastic body parts to a metal body before the body is coated does not cause the metal body coating operation to be exempted.

(c) The provisions of this subpart apply to any affected facility identified in paragraph (a) of this section that begins construction, reconstruction, or modification after October 5, 1979.

§ 60.391 Definitions.

(a) All terms used in this subpart that are not defined below have the meaning given to them in the Act and in subpart A of this part.

Applied coating solids means the volume of dried or cured coating solids which is deposited and remains on the surface of the automobile or light-duty truck body.

Automobile means a motor vehicle capable of carrying no more than 12 passengers.

Automobile and light-duty truck body means the exterior surface of an automobile or light-duty truck including hoods, fenders, cargo boxes, doors, and grill opening panels.

Bake oven means a device that uses heat to dry or cure coatings.

Electrodeposition (EDP) means a method of applying a prime coat by which the automobile or light-duty truck body is submerged in a tank filled with coating material and an electrical field is used to effect the deposition of the coating material on the body.

Electrostatic spray application means a spray application method that uses an electrical potential to increase the transfer efficiency of the coating solids. Electrostatic spray application can be used for prime coat, guide coat, or topcoat operations.

Flash-off area means the structure on automobile and light-duty truck assembly lines between the coating application system (dip tank or spray booth) and the bake oven.

Guide coat operation means the guide coat spray booth, flash-off area and bake oven(s) which are used to apply and dry or cure a surface coating between the prime coat and topcoat operation on the components of automobile and light-duty truck bodies.

Light-duty truck means any motor vehicle rated at 3,850 kilograms gross vehicle weight or less, designed mainly to transport property.

Plastic body means an automobile or light-duty truck body constructed of synthetic organic material.

Plastic body component means any component of an automobile or light-duty truck exterior surface constructed of synthetic organic material.

Prime coat operation means the prime coat spray booth or dip tank, flash-off area, and bake oven(s) which are used to apply and dry or cure the initial coating on components of automobile or light-duty truck bodies.

Purge or line purge means the coating material expelled from the spray system when clearing it.

Solids Turnover Ratio (R_T) means the ratio of total volume of coating solids that is added to the EDP system in a calendar month divided by the total volume design capacity of the EDP system.

Solvent-borne means a coating which contains five percent or less water by weight in its volatile fraction.

Spray application means a method of applying coatings by atomizing the coating material and directing the atomized material toward the part to be coated. Spray applications can be used for prime coat, guide coat, and topcoat operations.

Spray booth means a structure housing automatic or manual spray application equipment where prime coat, guide coat, or topcoat is applied to components of automobile or light-duty truck bodies.

Surface coating operation means any prime coat, guide coat, or topcoat operation on an automobile or light-duty truck surface coating line.

Topcoat operation means the topcoat spray booth, flash-off area, and bake oven(s) which are used to apply and dry or cure the final coating(s) on components of automobile and light-duty truck bodies.

Transfer efficiency means the ratio of the amount of coating solids transferred onto the surface of a part or product to the total amount of coating solids used.

VOC content means all volatile organic compounds that are in a coating expressed as kilograms of VOC per liter of coating solids.

Volume Design Capacity of EDP System (LE) means the total liquid volume that is contained in the EDP system (tank, pumps, recirculating lines, filters, etc.) at its designed liquid operating level.

Waterborne or water reducible means a coating which contains more than five

weight percent water in its volatile fraction.

(b) The nomenclature used in this subpart has the following meanings:

C_{aj} =concentration of VOC (as carbon) in the effluent gas flowing through stack (j) leaving the control device (parts per million by volume),

C_{bi} =concentration of VOC (as carbon) in the effluent gas flowing through stack (i) entering the control device (parts per million by volume),

C_{rk} =concentration of VOC (as carbon) in the effluent gas flowing through exhaust stack (k) not entering the control device (parts per million by volume),

D_{ci} =density of each coating (i) as received (kilograms per liter),

D_{dj} =density of each type VOC dilution solvent (j) added to the coatings, as received (kilograms per liter),

D_r =density of VOC recovered from an affected facility (kilograms per liter),

E =VOC destruction or removal efficiency of the control device,

F =fraction of total VOC which is emitted by an affected facility that enters the control device,

G =volume weighted average mass of VOC per volume of applied solids (kilograms per liter),

L_{ci} =volume of each coating (i) consumed, as received (liters),

L_{cil} = Volume of each coating (i) consumed by each application method (l), as received (liters),

L_{dj} =volume of each type VOC dilution solvent (j) added to the coatings, as received (liters),

L_r =volume of VOC recovered from an affected facility (liters),

L_s =volume of solids in coatings consumed (liters),

L_E =the total volume of the EDP system (liters),

M_d =total mass of VOC in dilution solvent (kilograms),

M_0 =total mass of VOC in coatings as received (kilograms),

M_r =total mass of VOC recovered from an affected facility (kilograms),

N =volume weighted average mass of VOC per volume of applied coating solids after the control device

$$\frac{\text{kilograms of VOC}}{\text{liter of applied solids}},$$

Q_{aj} =volumetric flow rate of the effluent gas flowing through stack (j) leaving the control device (dry standard cubic meters per hour),

Q_{bi} =volumetric flow rate of the effluent gas flowing through stack (i) entering the control device (dry standard cubic meters per hour),

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Q_{fk} =volumetric flow rate of the effluent gas flowing through exhaust stack (k) not entering the control device (dry standard cubic meters per hour),

T =overall transfer efficiency,

T_i =transfer efficiency for application method (i),

V_{si} =proportion of solids by volume in each coating (i) as received

$$\frac{\text{liter solids}}{\text{liter coating}}, \text{ and}$$

W_{oi} =proportion of VOC by weight in each coating (i), as received

$$\frac{\text{kilograms VOC}}{\text{kilograms coating}}$$

[45 FR 85415, Dec. 24, 1980, as amended at 59 FR 51386, Oct. 11, 1994; 65 FR 61760, Oct. 17, 2000]

§ 60.392 Standards for volatile organic compounds

On and after the date on which the initial performance test required by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall discharge or cause the discharge into the atmosphere from any affected facility VOC emissions in excess of:

(a) Prime Coat Operation. (1) For each EDP prime coat operation:

(i) 0.17 kilogram of VOC per liter of applied coating solids when R_T is 0.16 or greater.

(ii) $0.17 \times 350^{(0.160 - R_T)}$ kg of VOC per liter of applied coating solids when R_T is greater than or equal to 0.040 and less than 0.160.

(iii) When R_T is less than 0.040, there is no emission limit.

(2) For each nonelectrodeposition prime coat operation: 0.17 kilogram of VOC per liter of applied coating solids.

(b) 1.40 kilograms of VOC per liter of applied coating solids from each guide coat operation.

(c) 1.47 kilograms of VOC per liter of applied coating solids from each top-coat operation.

[45 FR 85415, Dec. 24, 1980, as amended at 59 FR 51386, Oct. 11, 1994]

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§ 60.393 Performance test and compliance provisions.

(a) Section 60.8 (d) and (f) do not apply to the performance test procedures required by this section.

(b) The owner or operator of an affected facility shall conduct an initial performance test in accordance with § 60.8(a) and thereafter for each calendar month for each affected facility according to the procedures in this section.

(c) The owner or operator shall use the following procedures for determining the monthly volume weighted average mass of VOC emitted per volume of applied coating solids.

(1) The owner or operator shall use the following procedures for each affected facility which does not use a capture system and a control device to comply with the applicable emission limit specified under § 60.392.

(i) Calculate the volume weighted average mass of VOC per volume of applied coating solids for each calendar month for each affected facility. The owner or operator shall determine the composition of the coatings by formulation data supplied by the manufacturer of the coating or from data determined by an analysis of each coating, as received, by Method 24. The Administrator may require the owner or operator who uses formulation data supplied by the manufacturer of the coating to determine data used in the calculation of the VOC content of coatings by Method 24 or an equivalent or alternative method. The owner or operator shall determine from company records on a monthly basis the volume of coating consumed, as received, and the mass of solvent used for thinning purposes. The volume weighted average of the total mass of VOC per volume of coating solids used each calendar month will be determined by the following procedures.

(A) Calculate the mass of VOC used in each calendar month for each affected facility by the following equation where “n” is the total number of coatings used and “m” is the total number of VOC solvents used: